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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,849	06/08/2005	Hannu Ensio Jokinen	DN02-033	8519

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Michael J Herman
Minerals Technologies Inc
One Highland Avenue
Bethlehem, PA 18017

EXAMINER

NGUYEN, SANG H

ART UNIT	PAPER NUMBER
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2886

MAIL DATE	DELIVERY MODE
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01/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,849

Applicant(s)

JOKINEN, HANNU ENSIO

Examiner

Sang Nguyen

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 12/06/07.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's response to amendment filed 11/13/07 has been entered. It is noted that the application contains claims 1-6 by the amendment on 11/13/07.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12/06/07 has been entered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "a method for determining..." in line 7.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely <the position of the fixing marks are determined by: (a) deflecting and optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, (b) searching, based on the first temporary coordinate system, at least two further fixing marks and determining the position of the centers thereof, (c) defining, based on the center positions of said fixing marks the coordinate system of the container> would not appear to be sufficient to constitute a tangible result, since the outcome of the < the position of the fixing marks are determined by: (a) deflecting and optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, (b) searching, based on the first temporary coordinate system, at least two further fixing marks and determining

the position of the centers thereof, (c) defining, based on the center positions of said fixing marks the coordinate system of the container> step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

The claim is drawn to a judicial exception (abstract idea). For an abstract idea to be patentable, it needs to be directed to a practical application or have useful, concrete and tangible result. The position of the fixing marks are determined step, while useful and concrete, does not appear tangible; i.e., merely determining/calculating does not appear sufficient to constitute a practical result since it's not being used in a practical application nor made available in such a manner that its usefulness in the disclosed practical application can be realized. As such, the claim is nonstatutory under 101.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

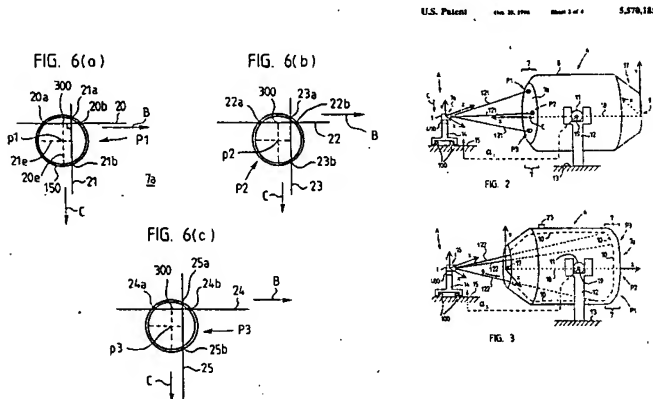
Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jokinen et al (U.S. Patent No. 5,570,180).

Regarding claim 1; Jokinen et al discloses a method for position a measuring device which emits and receives optical radiation to measure wear in the lining of a container (6 of figure 2), said method involving fixing coordinate systems (16, 17 of figure 2) for the measuring device (1 of figure 2) and the container (6 of figure 6) by combining that coordinate systems (16, 17 of figure 2), and individually determining the positions of a plurality of specific fixing marks (e.g., specific fixing points [P1, P2, P3 of figure 2]) in the coordinate system (16 of figure 1) of the measuring device (1 of figure 1), wherein each of said fixing marks (e.g., specific fixing points [P1, P2, P3 of figure 2]) is substantially regular in shape, the method for determining the position of the fixing marks (claim 1) comprising the step of :

(a) deflecting and optical radiation beam across a first fixing mark (e.g., a first fixing point [P1 of figures 2-3]) in first and second intersecting directions (B, C of figure 6a and claim 1) and determining the position of the center (p1 of figure 6a) of the first fixing mark (P1 of figure 6a) and least two linear edges (20, 21 of figure 6a) of the first fixing mark (P1 of figure 6a) by a distance measurement electronic (2 of figure 1) and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges of the first fixing mark (col.5 line 9 to col.6 line 25),

(b) searching, based on the first temporary coordinate system, at least two further fixing marks (P2, P3 of figures 6b-6c) and determining the position of the centers thereof (col.5 line 9 to col.6 line 25), and

(c) defining, based on the center positions (p1, p2, p3 of figures 6a-6c) of said fixing marks (P1, P2, P3 of figure 6a-6c) in the coordinate system of the container (17 of figures 2-3). See figures 1-8



Regarding claim 4; Jokinen et al discloses the center of the fixing marks (P1, P2, P3 of figures 6a-6c) is calculated from the deflecting of the optical radiation beam across each of the fixing marks in the first and second intersecting direction (claim 4 and figures 6a-6c).

Regarding claim 5; Jokinen et al discloses the deflecting of the optical radiation beam across each of the fixing marks (P1, P2, P3 of figures 1 and 6a-6c) is detected by one of distance measuring and reflection intensity measuring (claim 5).

Regarding claim 6; Jokinen et al discloses the fixing marks (P1, P2, P3 of figures 6a-6c) comprise a retro-reflective surface (claim 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jokinen et al (U.S. Patent No. 5,570,185).

Regarding claim 2; Jokinen et al discloses the first fixing mark (P1 of figure 6a) is substantially regular shape is a circular and/or annular (col.4 lines 64-67). However, Jokinen et al discloses all of features of claimed invention except for the first fixing mark is a rectangular in shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of measuring position device of Jokinen et al with the first fixing mark is a rectangular in shape, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Regarding claim 3; Jokinen et al discloses the first fixing mark (P1 of figure 6a) is equal to the at least two further fixing marks (P2, P3 of figure 6b-6c). However, Jokinen et al discloses all of features of claimed invention except for the first fixing mark larger in size than the at least two further fixing marks. It would have been an obvious matter of design choice to combine method of measuring position device of Jokinen et al with the first fixing mark is larger in size than the at least two further fixing marks, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Response to Arguments

Applicant's arguments filed 11/13/07 have been fully considered but they are not persuasive. Applicant's argued in pages 5-7, that "claims as amended are directed to a method of determining the position of fixing marks in the method for positioning a measuring device is overcome rejection nonstatutory under 101"; Jokinen ('185) does not teach or suggest the feature "deflecting the optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, wherein the first temporary coordinate system is based on the position of the center and the directions of the at least two linear edges of the fixing mark", and

there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves.

This argument is not persuasive.

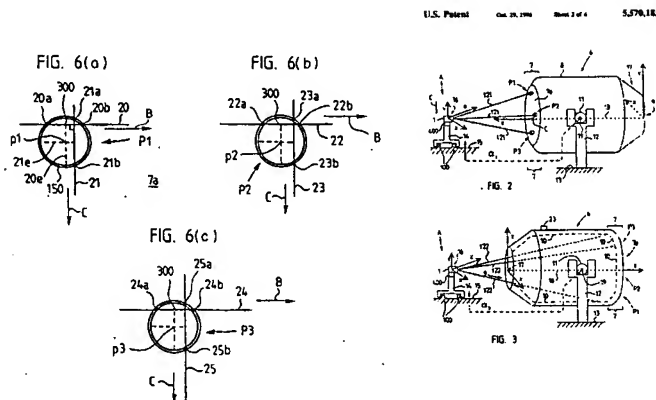
In response to applicant's argument that applicant has been amended independent claim 1 to clarify the feature of "method of determining the position of fixing marls in the method for positioning a measuring device ..." is not overcome the stated rejection under 35 U.S.C. § 101. Because the claim 1 fails to include transformation from one physical state to another. Although, the claims appear useful and concrete, **there does not appear to be a tangible result claimed.** Merely method comprising the steps of... detecting/measuring, determining/calculating, or selecting/classifying is drawn to a judicial exception (abstract idea). For an abstract idea to be patentable, it needs to be directed to a practical application or have useful, concrete and tangible result. The final determining/calculating step, while useful and concrete, does not appear tangible; i.e., merely determining/ calculating does not appear sufficient to constitute a practical result since it's not being used in a practical application nor made available in such a manner that its usefulness in the disclosed practical application can be realized. **For the results to be tangible, it would need to output to user, be displayed to a user, stored for later used, or used in any tangible manner.** As such, the claim is nonstatutory under 101. (See MPEP

Sec. 2106 and

[/www.uspto.gov/web/offices/com/sol/oq/2005/week47/pat.qupa.htm](http://www.uspto.gov/web/offices/com/sol/oq/2005/week47/pat.qupa.htm)>).

In response to applicant's argument that applicant Jokinen ('185) does not disclose or suggest the feature "deflecting the optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, wherein the first temporary coordinate system is based on the position of the center and the directions of the at least two linear edges of the fixing mark" as recited in claim 1. The argument is disagreed. As stated in previous Office action, Jokinen ('185) discloses an method comprising the steps of (a) deflecting and optical radiation beam across a first fixing mark (e.g., a first fixing point [P1 of figures 2-3]) in first and second intersecting directions (B, C of figure 6a and claim 1) and determining the position of the center (p1 of figure 6a) of the first fixing mark (P1 of figure 6a) and least two linear edges (20, 21 of figure 6a) of the first fixing mark (P1 of figure 6a) by a distance measurement electronic (2 of figure 1) and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges of the first fixing mark (col.5 line 9 to col.6 line 25), (b) searching, based on the first temporary coordinate system (17, 9 of figure 2), at least two further fixing marks (P2, P3 of figures 6b-6c) and determining the position of the centers thereof (col.5 line 9 to col.6 line 25), and (c) defining, based on the center positions (p1, p2, p3 of figures 6a-6c) of said fixing marks

(P1, P2, P3 of figure 6a-6c) in the coordinate system of the container (17 of figures 2-3). See figures 1-8



In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Thus, the references are considered in combination, the recitation of the claims would have been obvious suggested.

For the reasons set forth above the arguments, it is believed that the rejection of the claims 1-6 under 35 U.S.C 102 (b) and 103 (a) is proper.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harvill et al (6922252) discloses automated positioning method for contouring measurements; Kirchhoff et al (6922251) discloses measurement of the wear of the fireproof lining of a metallurgical vessel; Jokinen (5706090) discloses method for positioning a container for measuring wear in the container lining, Jokinen (5546176) discloses method for measuring wear in the lining of a container; or Kirchhoff et al (WO 03/100336) discloses a method for repairing a protective lining of an industrial reaction or transport vessel.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

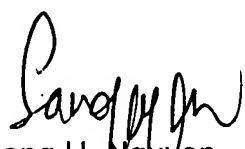
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2800 ext. 86. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 24, 2008


Sang H. Nguyen
Primary Patent Examiner
Art Unit 2886